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ITALIAN RYE-GRASS (*Lolium italicum*).

Description.—Italian rye-grass is an erect or slightly decumbent grass, generally considered an annual or a short-lived perennial, lasting, as a rule, about two years. A native of Europe, it has been cultivated in Great Britain for many years, being considered there one of the best hay grasses. The blades have a peculiar shining green color, and are most abundant near the base of the plant, giving it a very pleasing appearance when young. The seed head resembles that of perennial rye very much, except that the seed possesses an awn, or beard.

Italian rye-grass grows very rapidly, producing a good hay crop the same season in which it is sown. The quality of the hay is good and the yield on rich soil is generally superior to that of timothy and other hay grasses for the first two seasons.

Value.—In England on land watered by liquid manure it is reported to yield from four to eight cuttings of very palatable hay. In the United States, however, it has not gained the prominence that it enjoys in Europe. West of the Cascade Mountains in Washington and Oregon, and in the corresponding district of northern California, it is looked upon with considerable favor. It does well on the irrigated lands in central Washington, and on the upland wheat soils of that State and northern Idaho near the mountains, where the rainfall is ample, but in the latter region it does not grow a strong straw and is liable to lodge badly in unfavorable weather. Its adaptability to widely diverse soil and climatic conditions is remarkable. In California it has won a reputation as a drought-resistant grass, while in the East it has been known to thrive in periods of very abundant moisture.

In the South Atlantic States, especially along the seacoast, it has found favor as an annual hay grass. Under such circumstances it is sown early in the fall and its rapid growth brings it to maturity about the middle of June. The hay is valued highly by liverymen and the yield is much better than that of timothy. Several farmers have successfully seeded cowpeas after harvesting the Italian rye-grass, thus securing two crops from the land in one season.

The use of Italian rye-grass in pasture mixtures throughout the Eastern and Central States is recommended on account of its quick germination and strong early growth. Sown in the fall, it comes on in the spring and furnishes pasture while the other grasses are getting started and, by its superior strength of root, prevents the more shallow rooted grasses from heaving out during the first winter. It is relished as a pasture by both horses and cattle, but should always bear a minor part in pasture mixtures because of the short duration of its growth.

Although it is not recognized generally, Italian rye-grass has always played a prominent part in the standard lawn-grass mixtures put up by seed houses. Its value in such mixtures is due to the fact that it germinates strongly and quickly, occupies the ground with a covering of the richest, brightest green, thus keeping out troublesome weeds, and then disappears at the end of the year giving place to Kentucky bluegrass, creeping bent, and other strongly perennial grasses with a finer leaf.

Seeding.—Seed of the Italian rye-grass may be obtained of the larger seed houses who handle imported seed. Although most of the seed used in this country at the present time is produced in England, the price is reasonable, ranging from 6 to 12 cents per pound. A bushel of the seed weighs about 24 pounds, and from 20 to 30 pounds are required to seed an acre of ground. This grass is almost invariably sown without a nurse crop. The ground should be prepared for seeding by a deep plowing, and then leveled by a thorough use of the disk or smoothing harrow. The continued use of the spike-tooth harrow until the ground is well settled is advisable. No one thing is the cause of so many failures in seeding grasses as a loose seed bed. When the soil is thoroughly firmed the seed may be sown broadcast and harrowed in or seeded with a press drill. It should be covered to a depth of from one-half to two inches, depending on the nature of the soil. In a heavy clay soil the covering should be extremely light, while in a sandy, loose soil so much care need not be exercised.

For use in lawns sufficient of the rye-grass seed should be used to insure a fair stand of it if quick results are desired. Although the blades are somewhat coarse, the effect is pleasing, owing to the brilliant green color of the foliage.

In laying a Bermuda grass lawn in the South, either with seed or by the use of sod, it is suggested that 20 pounds per acre of Italian rye-grass seed be sown at the same time. This seed, germinating quickly, will occupy the ground and give the lawn a pleasing appearance while the Bermuda is throwing out its runners.

H. N. VINALL,

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